

ABSTRACT

The inventive method for producing a metallized image on a sheet material consists in impregnating said material with a metal-salts containing solution and in exposing the specified material points to laser radiation pulses. The interaction of said pulses with the solution within a laser spot initiates a photochemical reaction resulting in reduction of a metal ion into the elementary state thereof by associating the required number of electrons, and in the deposition of a metallic film which is firmly fixed to a filler of the sheet material in a laser spot area on the material surface. In case of the sufficient power, a recess is formed in the sheet material surface, and the metallic film is deposited at the bottom thereof. The inventive device for carrying out said method for producing a metallized image on a sheet material comprises means for impregnating the sheet material with the metal salts-containing solution and means provided with a laser pulse generator for fixing a metal to said sheet material, a unit for controlling the pulse intensity, and a unit for focusing pulses on the specified points of the sheet material.
